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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MEW, KEVIN D	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/784,914	HWANG ET AL.	
	Examiner	Art Unit	
	Kevin Mew	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7 and 15-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,15,16,20 and 21* is/are rejected.

7)☒ Claim(s) *4-7 17-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Final Action

Response to Amendment

1. Applicant's Remarks/Arguments filed on 11/13/2006 regarding claims 1, 15, 20-21 have been considered. Claims 3, 8-14 have been canceled by applicant and claims 1-2, 4-7, 15-21 are currently pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 20-21** are rejected under 35 U.S.C. 102(e) as being anticipated by Parsa et al. (USP 6,643,318).

Regarding claim 1, Parsa discloses a method for assigning a channel to a UE (user equipment) by a UTRAN (UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network) in a CDMA (Code Division Multiple Access) communication system (**CDMA network**, see lines 10-12, col. 4 and Fig. 7), the method comprising the steps of:

receiving a access preamble signature from the UE (**base station receives a particular access preamble from a mobile station**, see lines 20-37, col. 5);

determining an available physical common packet channel (PCPCH) in the UTRAN in response to the received access preamble signature (**base station determines an available**

CPCH channel in response to the access preamble AP received at the base station from the mobile station, col. 16, lines 26-36);

selecting one of a plurality of channel assignment signatures (**selecting a CD-AICH with a CD signature;** note that the combination of CD-AICH and a CD signature is considered as a channel assignment signature) based on the determined physical common packet channel (PCPCH) (**based on an available CPCH channel assigned by base station to one of the contending mobile stations by sending an CD-AICH acknowledgement (containing CPCH channel availability information) with a CD signature to the mobile station**, see col. 9, lines 14-25 and col. 10, lines 31-36; note that CPCH is carried by the Physical CPCH, see col. 6, lines 9-10, col. 16, lines 26-48); and

transmitting the selected channel assignment signature to the UE (**base station BS assigns the available channel to a mobile station MS by transmitting a CD-AICH signal with a CD signature**, col. 16, lines 26-48).

Regarding claim 20, Parsa discloses a method for assigning a channel to a UE (user equipment) by a UTRAN (UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network) in a CDMA (Code Division Multiple Access) communication system (**CDMA network**, see lines 10-12, col. 4 and Fig. 7), the method comprising the steps of:

receiving a selected one of a plurality of access preamble signatures from the UE (**base station BS receives an access preamble AP from a mobile station**, col. 16, lines 26-48);

transmitting a access preamble acquisition indicator signal to the UE (**BS sends out an acquisition indicator AICH for the CPCH channel to the mobile station**, col. 16, lines 26-48);

receiving a collision detection preamble from the UE (**receives a CD preamble from the mobile station**, col. 16, lines 26-48);

determining a specific channel assignment signature (**CD-AICH with a CD signature**) from a plurality of channel assignment signatures so as to select one of a plurality of unused PCPCHs (physical common packet channels) (**the base station assigns and selects an available CPCH channel to one MS station**) depending on the received access preamble signature (**depending on the access preamble AP received from the mobile station**) and a channel assignment signature (**depending on AP-AICH or AP-AICH_NEG**, col. 16, lines 26-36); and

transmitting a collision detection indicator channel signal (**transmitting CD-AICH**) and the determined specific channel assignment signature to the UE (**CD-AICH and a CD signature that corresponds to the selected mobile station's CD preamble**, col. 37-48).

Regarding claim 21, Parsa discloses a method for assigning a channel in a UE (user equipment) for a CDMA (Code Division Multiple Access) communication system, (**CDMA network**, see lines 10-12, col. 4 and Fig. 7), comprising the steps of:

upon generation of data to be transmitted over a PCPCH channel, selecting one of a plurality of access preamble signatures (**selecting a AP signature from the signature set**, col. 14, lines 64-65) and transmitting the selected access preamble signature to a UTRAN (**mobile station transmits the access preamble**, col. 15, lines 10-12);

receiving a access preamble acquisition indicator signal from the UTRAN (**mobile station receives an acquisition indicator AICH for the CPCH channel from the base station BS**, col. 15, lines 42-50, col. 16, lines 26-48);

transmitting a collision detection preamble to the UTRAN (**transmits a CD preamble to the base station**, col. 16, lines 26-48);

receiving a collision detection indicator channel signal (**receives a CD-AICH signal at the mobile station from the base station**, col. 16, lines 26-48) and a selected one of a plurality of channel assignment signatures from the UTRAN (**a CD-AICH with a CD signature**); and

determining a PCPCH channel for transmitting data (**determine/assign a CPCH channel for transmission of data**) depending on the received access preamble signature (**depending on the access preamble AP received from the mobile station) and the received channel assignment signature (depending on CD-AICH with a CD signature**, col. 16, lines 26-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 2, 9, 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsa in view of Kanterakis et al. (USP 6,169,759).

Regarding claims 2, 9, 16, Parsa discloses all the aspects of the claimed invention set forth in the rejection of claim 1, claim 8, and claim 15, respectively, except fails to explicitly show that the UTRAN selects one of the channel assignment signatures depending on a maximum data rate required when the UE transmits data.

However, Kanterakis discloses using the maximum possible data rate the CPCH users are allowed to transmit (col. 9, lines 52-54, lines 62-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the collision detection signature technique of Parsa with the teaching of Kanterakis in using a maximum data rate for CPCH transmission such that receiving a maximum data rate supported by available physical common packet channels (PCPCHs) in the UTRAN and transmitting the selected access preamble signature to the UTRAN based on this rate.

The motivation to do so is to prevent the CPCH users from transmitting at a rate that could possibly exceed the uplink system capacity and therefore disrupt the communication for all users currently connected to the base station.

Regarding claim 15, Parsa discloses a method for assigning a channel in a UE (user equipment) for a CDMA (Code Division Multiple Access) communication system (**CDMA network**, see lines 10-12, col. 4 and Fig. 7), comprising the steps of:

upon generation of data to be transmitted over a PCPCH channel, selecting one of a plurality of access preamble signatures and transmitting the selected access preamble signature to a UTRAN (**mobile station transmits a particular access preamble from a set of predefined access preambles to a base station**, see lines 19-26, col. 5);

receiving a selected one of a plurality of channel assignment signatures from the UTRAN (**selecting a CD-AICH with a CD signature;** note that the combination of CD-AICH and a CD signature is considered as a channel assignment signature) based on the available physical common packet channel (PCPCH) (**based on an available CPCH channel assigned by base station to one of the contending mobile stations by sending an AP-AICH acknowledgement (containing CPCH channel availability information) to the mobile station**, see col. 9, lines 14-25 and col. 10, lines 31-36; note that CPCH is carried by the Physical CPCH, see col. 6, lines 9-10, col. 16, lines 26-48); and

determining a PCPCH channel for transmitting the data depending on the received channel assignment signature (**collision detection signature will be selected by the mobile station upon receiving AP-AICH acknowledgement and hence the selected CPCH channel**, see lines 30-47, col. 10).

Parsa does not explicitly show receiving a maximum data rate supported by available physical common packet channels (PCPCHs) in the UTRAN and transmitting the selected access preamble signature to the UTRAN based on this rate.

However, Kanterakis discloses using the maximum possible data rate the CPCH users are allowed to transmit (col. 9, lines 52-54, lines 62-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the collision detection signature technique of Parsa with the teaching of Kanterakis in using a maximum data rate for CPCH transmission such that receiving a maximum data rate supported by available physical common packet channels (PCPCHs) in the UTRAN and transmitting the selected access preamble signature to the UTRAN based on this rate.

The motivation to do so is to prevent the CPCH users from transmitting at a rate that could possibly exceed the uplink system capacity and therefore disrupt the communication for all users currently connected to the base station.

Response to Arguments

4. Applicant's arguments filed on 11/13/2006 regarding claims 1, 15, 20-21 have been fully considered but they are not persuasive.

Applicant again argued and asserted on page 1, third paragraph of applicant's Remarks that Parsa's base station "BS does not select a new signature," and on page 1, fourth paragraph that Parsa's does not "support a BS selecting a CD signature," it is noted by the examiner that applicant's argument that the references fail to show certain features of applicant's invention, it is

noted that the features upon which applicant relies (i.e., "the BS does not select a new signature," "does not support a BS selecting a CD signature") are not recited in the rejected claim(s). The claim limitations in neither claim 1 nor claims 20-21 discloses that the *base station* selects a *new* signature that must be different from the CD signature received from the mobile station. It is further noted that "base station" is not even claimed in claims 1, 20-21, let alone a base station selects a new signature or supports a BS selecting a CD signature. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argued on page 2, first paragraph of the Remarks that Parsa does not disclose "determining an available physical common packet channel," the examiner respectfully disagrees. Applicant's attention is directed to the aforementioned lines 30-47, col. 10 as recited in the claim rejection of claim 15 set forth above, that the Parsa's reference discloses collision detection signature will be selected by the mobile station upon receiving AP-AICH acknowledgement and hence the selected CPCH channel.

In light of the foregoing, claims 1, 20-21 stand rejected under 35 U.S.C. 102(e) as being anticipated by Parsa et al. (USP 6,643,318), and claims 2, 9, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parsa in view of Kanterakis et al. (USP 6,169,759).

Allowable Subject Matter

5. Claims 4-7, 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 4, the method as claimed in claim 3, wherein the PCPCH selecting step comprises the steps of:

determining a number P_{SF} of PCPCHs capable of supporting a data rate required when the UE transmits data out of an available PCPCHs;

determining a number S_{SF} of access preamble signature available for the data rate required when the UE transmits data;

determining a number T_{SF} of channel assignment signatures available for the data rate depending on the number P_{SF} of the PCPCHs;

calculating a minimum positive number M_{SF} out of positive numbers which are

determined to have a remainder of '0' when multiplying the number S_{SF} of the access preamble signatures by a given positive number and dividing the multiplied value by the number P_{SF} of the PCPCHs;

calculating a specific coefficient 'n' satisfying the following equation

$$n*M_{SF}*S_{SF} <= i+j*S_{SF} < (n+1)*M_{SF}*S_{SF}$$

where i denotes an access preamble signature number and j denotes a channel allocation message number; and

selecting one PCPCH's number 'k' out of the PCPCHs unused in the UTRAN by satisfying the following equation

$$k= \{[(i+n) \bmod S_{SF}]+j*S_{SF}\} \bmod P_{SF}.$$

In claim 6, the method as claimed in claim 1, wherein the channel assignment signature (j) is selected by satisfying following equation;

$$n*M_{SF}*S_{SF} <= i+j*S_{SF} < (n+1)*M_{SF}*S_{SF}$$

where, i is number of the access preamble signature, the S_{SF}: is a number of access preamble signatures assigned for the maximum data rate determined by the access preamble signature, the M_{SF} is a minimum positive number (M_{SF}) out of positive numbers which are determined to have a remainder of '0' when multiplying the number S_{SF} by a given positive number and dividing the multiplied value by a number P_{SF}. representing number of PCPCHs assigned to support the maximum data rate, the n indicates how many tunes a period of M_{SF} has been repeated.

In claim 17, the method as claimed in claim 15, wherein the PCPCH (k) is determined by satisfying following equation;

$$k = \{[(i+n) \bmod S_{SF}]+j*S_{SF} \bmod P_{SF}.$$

where, i is a number of the access preamble signature, the j is a number of the received channel assignment signature, the S_{SF} is a number of access preamble signatures assigned for the data rate determined by the access preamble signature, the P_{SF} representing number of PCPCHs assigned to support the maximum data rate, and the n indicates how many times a period of M_{SF},

which represent a minimum positive number out of positive numbers which are determined to have a remainder of '0' when multiplying the number S_{SF} by a given positive number and dividing the multiplied value by a number P_{SF}, has been repeated.

In claim 18, the method as claimed in claim 15, wherein the selecting step comprises the steps of:

determining a number P_{SF} of PCPCHs capable of supporting a data rate required when the UE transmits data out of the available PCPCHs;

determining a number S_{SF} of access preamble signatures available for the data rate required when the UE transmits data;

determining a number T_{SF} of channel assignment signatures available for the data rate depending on the number P_{SF} of the PCPCHs;

calculating a minimum positive number M_{SF} out of positive numbers which are determined to have a remainder of '0' when multiplying the number S_{SF} of the access preamble signatures by a given positive number and dividing the multiplied value by the number P_{SF} of the PCPCHs;

calculating a specific coefficient 'n' satisfying the following equation

$$n*M_{SF}*S_{SF} <= i+j*S_{SF} < (n+l)*M_{SF}*S_{SF}$$

where i denotes an access preamble signature number and j denotes a channel allocation message number; and

selecting one PCPCH's number 'k' out of the available PCPCHs in the UTRAN by satisfying the following equation

$$k= \{[(i+n) \bmod S_{SF}]+j*S_{SF}\} \bmod P_{SF}.$$

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 571-272-3141. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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